

In re Application of: Shlomo SHKOLNIK
Serial No.: 09/914,487
Filed: August 27, 2001
Final Office Action Mailing Date: December 20, 2007

Examiner: Jason Scott PROCTOR
Group Art Unit: 2123
Attorney Docket: 36538

The following amendments are based on the claims as they existed before the previous amendment after final which was not entered.

1-22. (Canceled)

23. (Currently Amended) A method of forming a vehicle design index, comprising:
providing a plurality of computerized design tools, said tools being adapted for carrying out a design task of a particular system of ~~the a~~ vehicle, at least some of which tools store information restricted to viewing by a respective limited group of workers, which workers are assigned to a particular system or systems of the vehicle;

gathering, by a computer, from the plurality of computerized design tools, information on elements of different systems of the vehicle, wherein the gathering includes retrieving from at least one of the computerized tools information on fewer than all the elements of the vehicle required for design of the system described by the tool;

storing the gathered information in the index; and

opening the index for viewing by workers at least some of which are assigned to a plurality of different systems of the vehicle from each other,

wherein storing the information in the index comprises storing only information which is authorized for viewing by workers assigned to any of the plurality of systems.

24. (Previously Presented) A method according to claim 23, wherein gathering the information comprises gathering information on the location of the elements in the vehicle.

25. (Previously Presented) A method according to claim 23, wherein gathering the information comprises gathering interconnection information of the elements.

26. (Previously Presented) A method according to claim 23, wherein gathering the information comprises gathering references to documents describing the elements.

27-29. (Cancelled)

30. (Previously Presented) A method according to claim 23, wherein gathering the

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information comprises gathering information on elements of an aircraft.

31. (Previously Presented) A method according to claim 23, wherein gathering the information comprises gathering the information periodically.

32-40. (Cancelled)

41. (Previously Presented) A method according to claim 72, comprising running a verification routine which finds design faults, on the data contained within the database.

42. (Original) A method according to claim 41, wherein running the verification routine comprises running a routine which checks for elements which are distanced from each other less than a minimal allowed distance.

43-50. (Cancelled)

51. (Previously Presented) A system according to claim 92, wherein at least some of the workers are associated with more than one of the worker codes.

52-71. (Cancelled)

72. (Previously Presented) A method of providing information between workers designing a vehicle, comprising:

- providing a working environment including a plurality of different departments, assigned to perform design tasks of respective different vehicle systems;

- selecting a plurality, but fewer than 10%, of the physical elements of each system of the vehicle to serve as major elements of the vehicle;

- gathering, for each of the major elements, information regarding the element, including an indication of the relative assembly of the element in the vehicle and a reference to a worker in charge of the element;

- storing the gathered information in a database, having records only for

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the major elements;

searching the database for information on one or more of the major elements; and

performing at least one of:

displaying information relating to the one or more major elements; and

sending an electronic message to a worker in charge of the element based on information found in the search.

73. (Previously Presented) A method according to claim 72, wherein gathering the information comprises gathering at least three levels of a hierarchy of systems and sub-systems to which the major elements belong.

74. (Previously Presented) A method according to claim 72, wherein selecting the major elements comprises selecting fewer than 1% of the physical elements of the vehicle.

75. (Previously Presented) A method according to claim 23, wherein the index is open for viewing by all workers working on the vehicle, while changing the index is allowed only to workers responsible for changing the data of the index.

76. (Previously Presented) A method according to claim 23, wherein gathering the information comprises gathering information on both electrical and mechanical elements.

77-79. (Cancelled)

80. (Previously Presented) A method according to claim 23, comprising initiating communication between workers designing the vehicle using different computerized tools, using information in the index.

81. (Previously Presented) A method according to claim 23, wherein gathering information on elements of the vehicle comprises gathering general information authorized for

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viewing by workers from a plurality of departments on elements having some details restricted to viewing by a limited group of workers.

82. (Currently Amended) A method, comprising:

- providing computerized design tools for various systems of ~~the~~a vehicle;
- designing various systems of the vehicle by workers using the computerized design tools;
- generating a database including information on the relationship between elements of the vehicle from the various systems, but including information on fewer than all the elements of the vehicle, said database being open to viewing by workers assigned to a plurality of said systems;
- opening the database for viewing by a worker assigned to a particular system of the vehicle;
- determining from the database, by the worker[[s]], which elements of systems other than the system to which the worker is assigned, are directly affected by a possible change in an element of the vehicle in the system to which the worker is assigned; and
- performing at least one of:
 - displaying information relating to one or more of said affected elements;
 - and
 - sending an electronic message to at least one worker in charge of the elements determined to be affected by the change, to discuss the possible change.

83. (Previously Presented) A method according to claim 82, wherein generating the database comprises generating a database including fewer than 10% of the elements of the vehicle, utilized by the design tools in designing the vehicle.

84. (Previously Presented) A method according to claim 82, wherein generating the database comprises generating a database including information insufficient to allow performing all the design tasks of the vehicle, which can be performed by the computerized tools.

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85. (Previously Presented) A method according to claim 82, wherein contacting workers in charge of the elements comprises determining the identities of the contacted workers, from the database.

86. (Currently Amended) A method of providing information between workers designing a vehicle, comprising:

providing a working environment including a plurality of different departments, assigned to perform design tasks of respective different vehicle systems or disciplines;

selecting fewer than 10% of the physical elements of each of the systems of the vehicle to serve as major elements of the vehicle;

gathering, for each of the major elements, information regarding the element, including an indication of a relative assembly of the element in the vehicle and a reference to a worker in charge of the element;

storing the gathered information in a database, having records only for the major elements;

managing in the database, for each selected element, an action item list including listings of at least one of actions related to the element which need to be performed or which were performed;

opening the database for viewing by authorized workers of a plurality of departments, who are assigned to different systems of the vehicle or who utilize different engineering disciplines involved in the design of the vehicle;

searching the database for information on one or more of the major elements, which may be affected by a possible change to the designed vehicle;

contacting a worker in charge of the element based on information found in the search; and

discussing with the contacted worker the proposed change.

87. (Previously Presented) A method of design of an aircraft or ship, comprising:

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(a) providing a plurality of design tools each particular tool having a group of authorized users and each containing information regarding parts used in an aircraft or ship under design sufficient to design a portion of the aircraft or ship using the particular design tool;

(b) providing a database containing information regarding fewer than all the parts needed for using any of the design tools and having information regarding parts used for a plurality of said design tools;

(c) providing access to the database to authorized users of more than one design tool; and

(d) utilizing the one design tool and information not contained in the one design tool but contained in the database to design or modify a part by an authorized user of the one design tool.

88. (Currently Amended) A method according to claim 86 wherein the ~~contained~~ information gathered in the database is limited to data that is essential to each authorized user for determining possible problems connected with issues to which the user-worker is not ~~qualified to solve and does not have primary responsibility for assigned~~.

89. (Previously Presented) A method according to claim 23 wherein workers assigned to said plurality of systems includes workers assigned to all the systems.

90. (Previously Presented) A method according to claim 32, wherein the message is sent automatically.

91. (Currently Amended) A ~~method-system~~ according to claim ~~50-92~~ wherein each of the parts have ~~and including assigning an identification code to each part and~~ wherein identical parts in different systems of the aircraft have different codes.

92. (Previously Presented) A computer system having stored therein a database for storing parts information in a working environment including a plurality of different departments, assigned to perform design tasks of respective different aircraft systems in which at least some parts of the aircraft are assigned a worker code that indicates worker responsibility for design of

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that part and also having a database that associates each of the worker codes with one or more workers responsible for the design, such that changing worker assignments does not require changes in the part numbers.